

## Using HIV to fight HIV

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US researchers have reported that an experiment using a genetically-modified HIV [virus](#) [1]A small infective organism which is incapable of reproducing outside a host cell. worked better than expected, suggesting a possible new way of combating HIV.

The small Phase-1 trial involved just five people who had a single infusion of the treatment, leading the investigators to caution that the findings need further exploration, however they said the results show that therapies of this type are a promising field for future investigation.

“The goal of this Phase-1 trial was safety and feasibility and the results established that,” said Dr Carl June of the University of Pennsylvania School of Medicine, who led the study. “But the results also hint at something much more.”

The treatment seemed to have a “vaccine-like effect,” he said, keeping viral loads down and raising CD4 counts in four of the five participants. After treatment, “the immune system was better in most of the patients than when they

The researchers developed the treatment by first removing part of the HIV virus, reducing it to about half its normal size. The protein envelope surrounding the virus was then reversed, in a process called antisense. The modified virus was then used to infect CD4 cells taken from trial volunteers, and the CD4 cells were transfused back into the patients, leading the newly-infected cells to produce defective copies of HIV. More than three years later, there is no evidence of any ill effects from the treatment.

A Phase-2 trial is now underway in people with HIV, and Dr June also hopes the technology could be used in HIV-negative people to prevent infection. —PNAS, Reuters

### Links:

[1] <http://www.napwa.org.au/glossary/term/125>

[2] <http://www.napwa.org.au/glossary/term/489>